

TEUCHMAN, Jan, mgr inz. (Szczecin)

Partial use of steel of higher tensile strength as one of
the ways of reducing the ship weight. Pt. 3. Bud okretowe
Warszawa 9 no. 9:303-306 S '64.

TEUCHMAN J. Z.
(2058)

Zakładu Farmakologii Doswiadczalnej U. W. w Warszawie. Ciała czynne w przetworach obniżających ciśnienie krwi Active agents in blood pressure-reducing compounds Polski Tygodnik Lekarski 1948, 3/27-28 (839-844) Graphs 13
It seemed possible that the vasodilator effect of tissue extracts was based on the action of either lactic acid or potassium contained in these extracts. This hypothesis could not be confirmed by experiments. Meduski - Warsaw

SO: Excerpta Medica, Vol. 11, No. 4, Sect. 11 - April 1949

TEUCHMANN, Otakar

Raising the efficiency of production and the standard of living by
distribution of production programs. Jemna mech opt 7 no.8:229-230
Ag '62.

TEUCHMANN, O.

Under a new management. p. 37.

(Jemna Mechanika A Optika. Vol. 2, no. 2, Apr. 1957. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

BRANDA, dr.; TEUFEL, dr.

Eye accidents in the Liberec Region during 1950-1954. Cesk. ofth.
12 no.1:25-29 Mar 56.

(EYE, wounds and inj.
statist. in Czech.)
(WOUNDS AND INJURIES
eye, statist. in Czech)

L 29563-66 EWP(k)/ENT(m)/I/EWP(w)/EWP(t)/ETI IJP(c) JD/HW/JG
ACC NR: AP6018362 (A, N) SOURCE CODE: UR/0089/66/020/005/0440/0442

AUTHOR: Al'shevskiy, L. Ye.; Kuz'michev, Yu. S.; Kurochkina, L. H.; Lupakov, I. S.;
Neymark, V. Ye.; Teulin, I. I.

ORG: none

TITLE: Effect of ultrasound on the ductility of high-boron stainless steels

SOURCE: Atomnaya energiya, v. 20, no. 5, 1966, 440-442

TOPIC TAGS: steel, stainless steel, high boron steel, boron containing steel, steel ultrasonic treatment, steel plasticity, steel ductility, steel tube, tube extrusion/Kh18N15 steel, Kh18N10 steel, Kh18N6G9 steel, Kh17 steel

ABSTRACT: The effect of ultrasound on the plasticity of Kh18N15, Kh18N10, Kh18N6G9 and Kh17 stainless steels containing 2—3.7% boron has been investigated. Boron at contents above 1.8% forms coarse hypereutectic borides which lower the steel plasticity. It was found, however, that the shape and size of the boride inclusions can be improved by applying ultrasonic vibration to liquid steel during cooling and solidification. The effect of ultrasound was found to depend on the metal temperature. Good results were obtained at a pouring temperature of 1500C. Ultrasound applied at this temperature broke down boride inclusions into small particles uniformly distributed throughout the mass of metal and considerably improved the steel plasticity, especially in rolling. Rolled tube billets 77 and 106 mm in

Card 1/2

UDC: 621.789.2:669.15

L 29563-66

ACC NR: AP6018362

diameter were successfully extruded at 1050—1140C with 80—86% reduction into satisfactory quality tubes 50 or 71 mm in diameter and 800 mm long with walls 5—6 mm thick. The structure of high-boron stainless steels also can be refined by homogenizing annealing at 1200—1250C. Orig. art. has: 3 figures. [ND]

SUB CODE: 13, 11/ SUBM DATE: 14Aug65/ ORIG REF: 003/ ATD PRESS: 5 014

Card 2/2 CC

S/046/60/006/004/022/022
B019/B056

AUTHOR:

~~Tammin, I.~~

TITLE:

The Scientific-technical Conference on the Application of Ultrasonics in Production and in the Thermal Treatment of Alloys

PERIODICAL: Akusticheskiy zhurnal, 1960, Vol. 6, No. 4, pp. 513 - 514

TEXT: The pervoye Nauchno-tekhnicheskoye soveshchaniye po primeneniuyu ul'trazvuka v proizvodstve i termicheskoye obrabotke splavov (First Scientific-technical Conference on the Application of Ultrasonics in Production and in the Thermal Treatment of Alloys) took place in Moscow from June 27 to 28. This conference was organized by the Komitet po primeneniuyu ul'trazvuka NTO mashinostroiteley (Committee for the Application of Ultrasonics of the NTO of Machinebuilding Engineers). Ten lectures and three reports were delivered altogether, which dealt with the effects produced by elastic oscillations and vibrations upon the crystallization of alloys and also upon the phase transformations in solid metals and alloys. In the lectures delivered by G. I. Pogodin-Alekseyev and

Card 1/2

The Scientific-technical Conference on the
Application of Ultrasonics in Production and
in the Thermal Treatment of Alloys

S/046/60/006/004/022/022
B019/B056

V. V. Zableyev-Zotov, the effects of ultrasonics upon crystallization and zonal liquidation were investigated. I. I. Teumin dealt with basic questions of ultrasonic treatment of molten metals. V. M. Gavrilov pointed out the qualitative improvement of cast metals by ultrasonic treatment. In the lectures by E. Ch. Gini, Yu. A. Stepanov, Yu. P. Yakovlev, G. F. Balandin, I. D. Galushkin, and A. S. Cherepachenko the application of ultrasonics in casting aluminum- and zinc alloys was dealt with. E. A. Al'ftan delivered a lecture "On the Thermo-ultrasonic Treatment of Alloys". S. I. Borovikova gave a report on the effect produced by ultrasonic vibrations in the solidification of magnesium alloys. G. I. Bogodin-Alekseyev gave a report on research work carried out for the purpose of obtaining alloys of the "suspended type". I. I. Teumin reported on the construction of ultrasonic devices for technical purposes. ✓

Card 2/2

TEUMIN, I.

Scientific-Technological Congress on the Applications of Ultrasonics
in the Processing and Thermal Treatment of Alloys. Akust. zhur. 6
no.4;513-514 '60. (MIRA 13:12)
(Ultrasonic waves—Industrial applications)

TEUMIN, I.I.

Measuring the input of elastic vibration power into a load. Akust.
zhur. 8 no.3:372-373 '62. (MIRA 15:11)

1. Institut metallovedeniya i fiziki metallov, Moskva.
(Wave guides) (Vibration)

TEUMIN, I. I.

At the Dnepropetrovsk Mining Institute in Artem. Sergeyev from April 1939 to April 1947, the following dissertations were defended in connection with attaining the scholarly degree of Candidate of Technical Science (specializing in mining electrical engineering: I. A. Davidenko on 29 July 1940 defended his dissertation on the subject "Magnetic defectoscopy for lifting cables".

The official opponents of this dissertation were the late Doctor of Technical Sciences Professor V. B. Umanskiy and Candidate of Physical-Mathematical Sciences I. I. Teumin.

A length of cable was investigated, made of twisted steel wire, which was magnetized by placing a coil upon it which was driven at a constant speed. The magnetizing winding was supplied with direct current. The coil also possessed a secondary winding. Defects in the cable (broken wires, abrasion) caused a change in the magnet current. The electromotive force in the second winding was amplified and recorded on an oscillograph. As a result it was determined that the sensitivity of the method is limited by the non-homogeneous structure of the cable and not by the recording instruments, as was supposed previously.

SO: Elektrichestvo [Electricity], No. 10, October 1947. Moscow

TEUMIN, I. I.

PA 20/49T104

USSR/Radio

Radio Receivers

Amplifiers

Oct 48

"Review of S. I. Yevtyanov's Book, 'Transition Processes in Receiver-Amplifier Systems,'" I. I. Teumin, Cand Physicomath Sci, 3/4 p

"Vest Svyazi - Elektrosvyaz'" No 10

Book is first work in or out of USSR to treat basic problems of analysis and calculations of transitional processes in radio circuits. Reviews favorably. Published by Svyaz'izdat, Moscow, 1948, 210 pp, 7 rubles.

20/49T104

TEUMIN, I. I.

"Transient Interference in Pulse-Time Modulation," Byull. TsNIIS, No 9,
1947, Radiotekhnika, No 5, 1949.

Central Scientific Research Institute of Communications, Ministry of Communications
(TsNIIS)

TEUMIN, I.I.

[Handbook on transient electrical processes] Spravochnik po perekhod-
nym elektricheskim protsessam. Moskva, Gos. izd-vo lit-ry po voprosam
svyazi i radio, 1951. 409 p.

(MIRA 7:1)

(Transients (Electricity))

GINZBURG, S.G.; TEUMIN, I.I., redaktor; GROZNOVA, V.I., redaktor; KORUZEV, N.N., tekhnicheskii redaktor.

[Methods of solving problems on transition transients in electric circuits] Metody reshenia zadach po perekhodnym protsessam v elektricheskikh tsepiakh. Pod red. I.I.Teumina. Moskva, Izd-vo "Sovetskoe radio," 1954. 251 p. (MIRA 8:4)
(Transients (Electricity)) (Electric circuits)

TEUMIN, I. I., kand. fiz.-mat. nauk

Theory of and calculations for the propagation of elastic waves in
molten metal. Probl. metalloved, 1 fiz. met. no.4:50-69 '55.
(Liquid metals) (Elastic waves) (MIRA 11:4)

~~TEUMIN, I.I.~~, MASHAROVA, V.G., redaktor; KORUZEV, N.N., tekhnicheskiy
redaktor

[Experimental analysis of transient processes in linear electric
circuits] Eksperimental'nyi analiz perekhodnykh protsessov v linei-
nykh elektricheskikh tsepiakh. Moskva, Izd-vo "Sovetskoe radio,"
1956. 534 p. (MLRA 9:11)

(Electric circuits)

(Transients (Electricity))

181111
TEMKIN, D.Ye.; TEUMIN, I.I.

Method of longitudinal oscillations for determining the
coefficient of internal viscosity. Zav. lab. 22 no.12:
1448-1451 '56.

(MLRA 10:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Viscosity) (Deformations (Mechanics))

TEUMIN, I. I.

"The Effect of Elastic Vibrations on Crystallization and on the Technical Properties of Metals and Alloys,"

report presented at the Seminar on Physics, Application of Ultrasound, 23-26 Oct 1957.

Leningrad Electro-Tech. Inst., Leningrad.

Teumin, I.I.

AUTHOR: Gurevich, Ya.B., Leont'ev, V.I. and Teumin, I.I.

TITLE: The influence of ultrasonics on the structure and properties of a steel ingot. (Vliyaniye ul'trazvuka na struktura i svoystva stal'nogo slitka). 133-5-5/27

PERIODICAL: "Stal'" (Steel), 1957, No.5, pp. 406-411 (U.S.S.R.)

ABSTRACT: A laboratory investigation of the above problem was carried out on steels X27 and X25H20 using a specially developed magnetostriction vibrator (Fig. 1) as an ultrasonic source (18 kc). The weights of ingots up to 2 kg. The influence of ultrasonics on the structure of ingots is shown in Figs. 2-7. A considerable improvement in micro-and macrostructures of ingots was obtained. Linear dimensions of grains decreased 3-5 times, acicular crystals practically disappeared, non-metallic inclusions somewhat decreased in size and were evenly distributed and dendritic segregation was decreased. A comparison of the chemical composition and mechanical properties of steel specimens cut from ingots (Fig. 8) cast with and without ultrasonic vibrations are given in Tables 1-3 and Figs. 9-11. Mechanical properties and the deformability of specimens cast with the use of ultrasonics were improved probably due to an improvement in structure of the cast metal as the chemical composition and the gas content remained practically unchanged.

Card 1/2

The influence of ultrasonics on the structure and properties
of a steel ingot. (Cont.)

133-5-5/27

Diffusion annealing of the cast metal and an 80% hot deformation (in the case of steel X27) did not remove the positive effect of ultrasonics only a decrease in their initial effect was observed. There are 3 tables, 11 figures and 11 references, including 8 Slavic.

ASSOCIATION: TsNIICHM.

(chernyy metallurgii)

AVAILABLE:

Card 2/2

AUTHOR: Gulyayev, B.B.
TITLE: Conference on Crystallization of Metals (Soveshchaniye po Kristallizatsii Metallov)
PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, No. 4, pp 153 - 155 (USSR)

ABSTRACT: This conference was held at the Institut mashinovedeniya AN SSSR (Institute of Mechanical Engineering of the Ac.Sc. USSR) on June 28-31, 1958. About 400 people participated and the participants included specialists in the fields of foundry, metallurgy, crystallography, physics, welding, heat, physical chemistry, mathematical physics and other related subjects. In addition to Soviet participants, foreign visitors included Professor D. Cziki (East Germany) and A.I. Ghorlinov (Czechoslovakia). This conference on crystallization of metals was the fourth conference relating to the general problem of the theory of foundry processes.

Crystallization of Non-ferrous Metals. N.M. Belousov and A.A. Rodinov - In their paper "Investigation of the Crystallization and the Properties of Non-ferrous Metals under Conditions of Applying Pressure", presented results of experiments on producing castings which crystallize under pressure from all sides and piston pressure within a wide range of temperatures. The results of the investigation provide a basis for improving existing methods of applying pressure to improving the properties of alloys. The influence of the conditions of crystallization on the casting and mechanical properties of aluminum alloys, at normal and at elevated temperatures, were discussed in the papers of I.F. Kolobnev and A.Ye. Gerasimov. The results of investigations of the conditions of crystallization of aluminum alloys during continuous casting were presented in the paper of Ye.B. Zakharov. B.L. Potrovskiy and D.Ye. Qusiyenko dealt with the features of crystallization of various non-ferrous alloys and the physico-chemical phenomena accompanying this process.

Crystallization of Metals in the Welding Bath. The following papers were read: B.A. Koychuk - "Investigation of the Features of the Microscopic Chemical Non-uniformity in Alloys"; G.P. Pecher - "Crystallization and Chemical Non-uniformity in Welds"; M.Kh. Shoroborov and V.G. Sedukhin - "Influence of the Conditions of Crystallization in the Weld Bath on the Formation of Hot Cracks".

Crystallization of Metals in an Ultrasonic Field. The following papers were read: Ye.L. Likhachev, A.A. Molodtsov, M.M. Sirota, Ye.L. Likhachev and the Ac.Sc. B.M. Gulyayenko - "Crystallization of Metals and Alloys in an Ultrasonic Field"; I.I. Tsygin - "Influence of Acoustic Oscillations on the Process of Crystallization and the Technological Properties of Alloys"; L.L. Shilin and A.A. Tsygin - "Effect of Ultrasonics on Crystallizing Metal in the Weld Bath".

Cards/10

Cards/10

16

TEUMIN I. I.

PHASE I BOOK EXPLOITATION SOV/3528

Moscow. Dom nauchno-tekhnicheskoy propagandy

Primeneniye ul'trazvuka v promyshlennosti; sbornik statey (Industrial Use of Ultrasound; Collection of Articles) Moscow, Mashgiz, 1959. 301 p. 8,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy KPSR.

Ed. (Title page): V.P. Kosharev, Doctor of Physical and Mathematical Sciences, Professor; Ed. (Inside book): G.P. Koshareva, Engineer; Tech. Ed.: V.D. Kosharev, Managing Ed. for literature on Machinery and Instrument Manufacturing (Mashgiz): M.V. Pokrovskiy, Engineer.

PURPOSE: This book is intended for engineers and technicians engaged in the application of ultrasonics in machinery manufacture and in other branches of industry.

COVERAGE: This is a collection of papers read at the first all-Union conference on the use of ultrasonics in industry. Attention is focused mainly on the description of ultrasonic equipment and on the use of ultrasound for the machining of hard materials and for flaw detection. The effect of ultrasound on metal-crystallization processes is also discussed. No personalities are mentioned. References accompany many of the papers.

Itaygorodskiy, Yu.Y., Engineer; and M.G. Kozan, Candidate of Technical Sciences. Ultrasonic Equipment for Industrial Applications 64

Markov, A.I., Candidate of Technical Sciences, Docent. Design and Construction of Vibrators for Ultrasonic Machining 77

Bulchava, I.M., Candidate of Technical Sciences; Ya.I. Gurvich, Candidate of Technical Sciences; and Ya.P. Solitskiy, Candidate of Technical Sciences. Magnetic Alloys for Ultrasonic Applications 91

Makarov, L.O., Engineer. Methods of Making Design Calculations for Bar-Type Exponential Ultrasonic Concentrators 102

Golyamina, I.P. Use of Ferrites as Ultrasonic-Wave Radiators 115

Semenikov, N.B., Engineer. Method of Transforming Input Resistance of a T-Bar Radiator 125

Sirofuk, M.G., Engineer. Matching a Generator of Electric Oscillations With a Quartz Radiator Directly Connected With the Generator Circuit 129

Lizhin, B.M., Engineer. Characteristics of the Ultrasonic Machining of Metals 136

Pisarskiy, M.M., Candidate of Technical Sciences; and A.A. Tikhonov, Experience Gained at the Leningradskiy Metallicheskiy Zavod (Leningrad Metal-Products Plant) in the Ultrasonic Drilling of Holes in Quartz Plates 146

Dyachenko, P.Ye., Doctor of Technical Sciences, Professor; Yu.S. Mironov, Engineer; and V.G. Aver'yanova. Some Problems in the Ultrasonic Machining of Materials 149

Teumin, I.I., Candidate of Physical and Mathematical Sciences. Acoustic Vibrations on the Crystallization and Processing Properties of Alloys 163

Bagdasarov, Kh.S., Candidate of Chemical Sciences. Effect of Ultrasonic Vibrations on the Process of Crystallization 175

Grayber, D.S., Candidate of Technical Sciences. Ultrasonic Flaw Detection 184

Kernolov, I.N., Engineer. Ultrasonic Instruments Developed by VNIITMASH for the Measurement of Thickness and Product Control 211

Gubanov, M.R., Candidate of Technical Sciences. Ultrasonic Detection of Flaws in Massive Welds 223

Tegorav, N.M., Ultrasonic Inspection of Case Depth in Electrically Hardened Steel Products 240

Rabin, N.V., Engineer. Design of Piezoelectric Transducers for Ultrasonic Flaw Detectors 253

TEUMIN, I.I. (Moskva)

Mechanism of the effect of ultrasonic waves on the crystallization
of metals. Izv. AN SSSR. Otd. tekhn. nauk. Met. i topl.

no.1:94-99 Ja-F '62.

(MIRA 15:2)

(Crystallization)

(Ultrasonic waves--Industrial applications)

36424

S/137/62/000/003/021/191
A006/A101

18.1151
AUTHORS: Gurevich, Ya. B., Leont'yev, V. I., Teumin, I. I.
TITLE: The effect of elastic oscillations during crystallization upon the structure, mechanical properties and deformability of grade X27 (Kh27) and X25H20 (Kh25N20) steels
PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 43-44, abstract 3V267 ("Sb. tr. In-t metalloved. i fiz. metallov Tsentr. n.-i. in-ta chernoy metallurgii", 1959, v. 6, 117-136)
TEXT: The authors investigated changes in the macrostructure, mechanical properties and deformability of grade Kh27 and Kh25N20 steel. Ingots of these steels were subjected to the effect of elastic oscillations of ultrasonic frequency on a machine developed by TsNIISHM. These steels are prone to the formation of a coarse granular structure, predetermining low mechanical properties, in particular low ductility and σ_k of Kh27 steel at room temperature, and low ductility and strength of Kh25N20 steel at high temperatures. Ingots weighing 700 - 900 g, 35 - 40 mm in diameter and 75 - 80 mm high, were subjected to ultrasonic treatment on the machine. All the ingots were melted from the same

Card 1/3

S/137/62/000/003/021/191
A006/A101

The effect of elastic oscillations ...

charge under equal conditions and were cast at 1,560 - 1,570°C. At this temperature the ingots produced without ultrasonic treatment showed a columnar coarse-grained macrostructure. After solidifying and cooling the ingots were cut alongside into halves. One half was investigated in cast state, the other one after diffusion annealing at 1,200 - 1,250°C for one hour with subsequent air cooling. After investigating the macrostructure, both halves of the ingots were cut into blanks, from which specimens were prepared for micro-investigation, determination of the chemical composition and gas content, mechanical tests and rolling. It was established that ultrasonic treatment of crystallizing ingots causes considerable refining of the structure. The linear dimensions of the grains are reduced by a factor of 3 - 5 as compared with grains of ingots which had not been ultrasonic-treated. The columnar crystals are almost fully absent, and consequently, the usual zonality in the ingot is absent, too. The size of non-metallic inclusions decreases and their distribution becomes more uniform, whilst in ingots which had not been treated by the ultrasonic method, the inclusions are arranged in the form of considerable accumulations or chains. In Kh25N20 steel subjected to ultrasonic treatment, the dendrite segregation is much less pronounced. Mechanical properties and deformability of Kh27 and Kh25N20 steels are improved as a result of ultrasonic treatment during crystalli-

Card 2/3

The effect of elastic oscillations ...

S/137/62/000/003/021/191
A006/A101

zation of the ingot. At room temperature the ductility and deformability of Kh27 steel increases to a particularly high degree. The authors point to the stability of the mechanical properties practically over the whole volume of the ingot whilst in such ingots which had not been ultrasonic treated the heterogeneity of properties is clearly marked. The chemical composition and the gas content did practically not change. Diffusion annealing of the cast metal and hot deformation do not eliminate the positive effect of ultrasonic treatment which is then only less pronounced. There are 12 references.

G. Lyubimova

[Abstracter's note: Complete translation]

Card 3/3

24(1)

PHASE I BOOK EXPLOITATION

SOV/1493

Teumin, Isay Il'ich

Ul'trazvukovyye kolebatel'nyye sistemy (Ultrasonic Vibrating Systems) Moscow, Mashgiz, 1959. 330 p. 5,000 copies printed.

Reviewer: D.S. Shrayber; Candidate of Technical Sciences; Ed.: Yu.V. Lange, Engineer; Ed. of Publishing House: A.L. Tairova; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Machine Building and Instrument Making (Mashgiz): N.V. Pokrovskiy, Engineer.

PURPOSE: This book is intended for engineering and technical personnel of design and manufacturing organizations, scientific research institutes, and also for students in vtuzes as a supplementary textbook for related courses.

COVERAGE: The author presents in a systematic way theoretical principles and engineering design of ultrasonic bar-type vibrating systems which are the main elements of the nonelectrical portion of ultrasonic equipment. A classification of ultrasonic systems is given and the theoretical principles of the steady state of these systems are presented. Methods of designing simple and complex

Card 1/8

Ultrasonic Vibrating Systems

SOV/1493

vibrating systems, matching devices, and some constructional elements are described. No personalities are mentioned. There are 40 references, of which 24 are Soviet, 12 English and 4 German.

TABLE OF CONTENTS:

Foreword	3
Introduction	4
Ch. I. Mechanical Vibrating Systems	
1. Basic definitions	7
2. Elements of the mechanical system	7
3. Mechanical resistance	11
4. Connections of mechanical resistances	15
5. Free vibrations in systems with lumped constants	20
6. Forced vibrations in systems with lumped constants	30
7. Natural frequencies of vibrating systems with lumped constants	37
	47

Card 2/8

TEUMIN, I.I.

Defektoskopiyu metallov: shorniy sborik. (Flaw Detection in Metals: Collection of Articles) Moscow, Osvetlitsa, 1959. 450 p. Extra slip inserted. 4,550 copies printed.	
M.I. D.S. Sharvber, Candidate of Technical Sciences; Ed.: M.S. Lagunovskiy; Tech. Ed.: V.P. Romko; Managing Ed.: A.S. Zayonchikov, Engineer.	
PREFACE: This book is intended for engineers and technicians in the field of nondestructive inspection and testing of metals.	
CONTENTS: This collection of articles deals with methods of nondestructive inspection and testing of metals. Results of investigations conducted at scientific research institutes and plants of magnetic, electrical, X-ray, ultrasonic, and fluorescent-penetrant methods of flaw detection are described. Detailed descriptions of flaw-detection methods and equipment are presented. Data are given on the results of the inspection of flaws in metal castings. No personalitis are mentioned.	
References follow several of the articles.	
Edits. A.A. Magnetization of Parts by Alternating Current and Inspection by the Magnetic-particle Method	17
Pytkin, D.G. Measuring Magnetic Fields on Parts of Intricate Shape and Inspection of Blades by the Magnetic-particle Method	55
Mikhovskiy, P.G. Equipment for Inspecting Parts by the Magnetic-particle Method	68
Remnev, B.M. Automatic Flaw Detector for Inspecting Mass-produced Steel Parts	76
Koshchakovskiy, S.M., and G.N. Sila-Boritskiy. Electromagnetic Induction Method of Flaw Detection	80
Shubert, I.M. Some Methods and Instruments for Nondestructive Inspection of the Thickness of Coatings on Parts	111
Pytkin, D.G. Magnetic and Fluorescent-penetrant Inspection of Parts in Nondestructive Testing	117
Sevost'yanov, I.M. Flaw Detection in Light-alloy Parts by the Electromagnetic Induction Method	126
Averchenko, P.A. High-frequency Induction Instrument for Detecting Cracks and Intergranular Corrosion	133
Polub, B.V. Fluorescent-penetrant Flaw-detection Method and the Experience Gained by Its Use in Machine Building	139
Isakova, S.P. Magnetic and Fluorescent-penetrant Inspection of Parts in Nondestructive Testing	155
Edits. A.A. Characteristic Features of the Use of the Fluorescent-penetrant Method of Inspecting Parts	165
Sila-Boritskiy, G.N. Nondestructive Magnetic Methods for Measuring Thicknesses of Coatings	166
Grishin, I.I. Electrical Thickness Gage for Measuring Anodized Coatings of Aluminum-alloy Parts	168
Pytkin, D.G. Thermoelectrical Method of Measuring Thicknesses of Electroplated Coatings	169
Pytkin, D.G. Thermoelectrical Method of Inspecting the Quality of Bonds in Rivets	192
Kornilov, B.I. Use of Back-scattering Beta-radiation for Inspecting Thicknesses of Coatings	196
Chernobrovov, S.V. New X-Ray Equipment and Image Recorders for X-Ray Flaw Detection	202
Chernobrovov, S.V. X-Ray Tube With Rotating Anode	219
Sharvber, D.S. Ultrasonic Flaw Detection	221
Lange, R.V., and G.V. Proskov. Equipment for Ultrasonic Inspection	256
Lange, R.V., and G.V. Proskov. General Characteristics of the Pulse-Echo Type Ultrasonic Flaw-detection Method	267
Edits. A.A. Characteristic Features of the Pulse-Echo Type Ultrasonic Flaw-detection Method	268
Pytkin, D.G. Ultrasonic Flaw-detection in Forgings and Valves of the Steel of the Turbine Reheaters	269
Lange, R.V., and G.V. Proskov. Automation of Ultrasonic Inspection	273
Pytkin, D.G., and I.I. Spasim. Application of Ultrasonic Vibrations for Processing and Testing Materials	274

Teumin, I.I.

18(0)

PHASE I BOOK EXPLOITATION 507/2125

Teztral'nyy nauchno-issledovatel'skiy institut Chernoy metallurgii.
Institut Metallovedeniya i fiziki metallov

Problemy metallovedeniya i fiziki metallov (Problems in Physical Metallurgy and Metal Physics) Moscow, Metallurgizdat, 1959.
540 p. (Series: Iti: Shornik trudov, 6) Errata slip inserted.
3,600 copies printed.

Additional Sponsoring Agency: USSR Gosudarstvennaya planovaya komissiya.

Ed. of Publishing House: Ye.M. Berlin; Tech. Ed.: P.O. Izlent'yeva;
Editorial Board: D.S. Kamanetskiy, B.Y. Lyubov (Resp. Ed.),
Ye.Z. Spaktor, L.M. Drevskiy, L.A. Shvartsman, and V.I. Malkin.

PURPOSE: This book is intended for metallurgists, metallurgical engineers, and specialists in the physics of metals.

COVERAGE: The papers in this collection present the results of investigations conducted between 1954 and 1956. Subjects

Card 1/18

covered include crystallization of metals, physical methods of influencing the process of crystallization, problems in the physical chemistry of metallurgical processes, development of new methods and equipment for investigating metals, and production control. References follow each article.

TABLE OF CONTENTS:

PART I. CRYSTALLIZATION OF METALS

Leont'yev, V.I. Effect of Ultrasonic Waves on the Crystallization of Ingots 117

For effective passage of ultrasonic waves through molten metal it is necessary to establish a definite limit of specific ultrasonic power. The time necessary for action of the waves on the molten metal must exceed a certain minimum, but at the same time not be as great as that required for complete solidification. Better results are obtained with the use of solid-inject molds and slower cooling. Ultrasonic waves induce intensive crystallization in all directions from points nuclei, the formation of which is aided by the action of the waves.

Gurevich, Ya.B., Candidate of Technical Sciences; V.I. Leont'yev; and I.I. Teumin, Candidate of Physical and Mathematical Sciences. Effect of Elastic Vibrations During Crystallization on the Structure, Mechanical Properties, and Deformability of Kh27 and Kh25Kh20 Steel 137

The application of elastic vibrations during crystallization results in a marked refinement of the grain. The linear dimensions of the grains are 3-5 times smaller than those of ordinary steel. Columnar crystals are almost entirely lacking. In addition, nonmetallic inclusions are relatively small and uniformly distributed. The mechanical properties of both types of steel are improved.

Keymark, V.Ye. Application of the Vacuum-Crystallization Method for Producing Hollow High-Alloy Steel Ingots for Rolling Into Tubes 137

This method is recommended for the production of high-quality thin-walled ingots (blanks). In cases where the blanks are long and thin-walled, or short and thin-walled, the centrifugal casting method is preferred. The vacuum-crystallization method is still in the experimental stage, but is already being used at several Soviet machine-building plants for producing hollow cylindrical blanks from nonferrous metals and alloys.

Teumin, I.I. Principles of Designing Magnetostrictive Vibrators 112

Basic principles of designing magnetostrictive vibration transformers for use in industrial equipment are presented. Special attention is given to the analysis of operating conditions in machining crystallizing metals and alloys.

GUREVICH, Ya.B., kand.tekhn.nauk; LEONT'YEV, V.I.; TRUMIN, I.I., kand.
fiz.-mat.nauk

Effect of elastic vibrations during crystallization on the structure, mechanical properties and the deformability of Kh27 and Kh25N20 steels. Probl.metalloved.i fiz.met. no.6:117-136 '59.
(MIRA 12:8)

(Crystallization) (Steel alloys--Testing) (Vibration)

TEUMIN, I.I., kand.fiz.-mat.nauk

Principles of designing magnetostriction oscillators. Probl.
metalloved.i fiz.met. no.6:412-452 '59. (MIRA 12:8)
(Magnetostriction)

TEUFEL, I.I. (Moskva)

Methods and characteristics of introducing elastic vibrations in
molten metals. Izv. AN SSSR. Otd. tekhn. nauk. Met. i topl. no.1:
24-30 Ja-F '61. (MIRA 14:2)

(Liquid metals)

(Elastic waves)

S/717/62/000/007/007/010
D207/D302

18.7500

AUTHOR: Teumin, I.I., Candidate of Physico-Mathematical Sciences

TITLE: Ultrasonic treatment of metals during crystallization

SOURCE: Dnepropetrovsk. Institut metallovedeniya i fiziki metallov.
Problemy metallovedeniya i fiziki metallov, no. 7, Moscow,
1962, 375 - 416

TEXT: The paper consists of three sections: In the first section the author reviews the available techniques, in the second he describes some experimental results, and in the third he gives a theory of the effects of ultrasound on crystallization of metals and alloys. The following variants of location of the ultrasonic source in a melt are considered in the first section: 1) At the top of the melt, 2) at the bottom, 3) in the middle, 4) at the top with continuous pouring, and 5) a seed in an arc furnace with consumable electrodes. In the second it is reported that ultrasound can have the following effects: a) Reduction of the mean grain size, b) elimination of columnar structure and production of equiaxed grains, c) change in

Card 1/2

Ultrasonic treatment of metals ...

S/717/62/000/007/007/010
D207/D302

phase distribution: amounts, grain sizes and mutual positions of various phases, d) increase of the uniformity of ingots, e) prevention of liquation, f) reduction of grain size of non-metallic inclusions and insoluble impurities, as well as more uniform distribution of such admixtures. Results confirming these effects are given for a high-strength nickel-based alloy, Silumin (14 % Si), brass, 85 % Cu + 15 % Al alloy, 75 % Cu + 25 % Sn alloy, steels X27, X25 H20, Г-12, and 40 (Kh27, Kh25N20, G-12 and 40); MA8 and AL-20 (MA8 and Al-20) alloys. A theory developed in the third section indicates how cavitation, vibrational pressure, viscous forces, radiation pressure, mixing, temperature equalization, intensification of fluctuations and of diffusion, all produced by ultrasound, combine to give the results (a) - (f) listed above. The relationship between all these effects and physical properties of alloys is discussed. There are 15 figures, 3 tables and 14 references: 11 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English-language publication reads as follows: A.N. Turner, Proc. Phys. Soc., 63, 220, 1950. B

Card 2/2

L 19748-63

EWP(k)/EWP(q)/EWT(m)/BDS

AFFTC/ASD Pf-4 JD/HW

ACCESSION NR: AT3001936

S/2912/62/000/000/0358/0372

AUTHORS: Abramov, O.V.; Neymark, V.Ye.; Teumin, I.I.

TITLE: On the characteristics and the mechanism of the effect of elastic vibrations on the crystallization process of metals and alloys

SOURCE: Kristallizatsiya i fazovyye perekhody. Minsk, Izd-vo AN BSSR, 1962, 358-372

TOPIC TAGS: crystal, crystallization, crystallography, elastic, vibration, ultrasound, ultrasonic, ultrasonics, grain size, columnar, structure, phase, distribution, nucleus, nucleation, supercooling, surface tension, impurity, stainless steel, 1Kh18N9, Kh25N20, tool steel, EI347, Al, AV000

ABSTRACT: The survey portion of this paper discusses briefly the effects of ultrasound (US) on (a) decrease in the mean magnitude of the grain; (b) elimination or at least alteration of the columnar structure; (c) change in the character of the phase distribution. A brief discussion is set forth of the frequently hypothesized causes of grain comminution and elimination or alteration of columnar structure, namely: (1) The breakup and dispersion of crystals growing on the walls, and the breaking off of particles from them, which subsequently serve as crystallization

Card 1/4

L 19748-63
ACCESSION NR: AT3001936

centers (CC); (2) the increase in probability of spontaneous nucleation in a US field; (3) some particular effect of impurities in a US field. In examining the possible increase in probability of nucleation in a US field, the importance of viscous friction arising in the motion of solid particles (nuclei) relative to a viscous liquid is examined. The friction force may contribute to a breaking off from the parent crystal of smaller crystals, which may serve as new CC's, and also to changes in the intensity of the surface tension (ST) on the boundary between the microcrystal and the liquid phase. Following a brief analytical exploration it is concluded that a possible action of elastic oscillations on the nucleation may be expressed in the reduction of the work of nucleus formation through viscous-friction forces. The mechanism of the reduction in ST is conceived as being derived from an "attachment" of liquid molecules to the crystalline-nucleus surface as a result of the motion of the nucleus and entrainment therewith, whereupon the difference in structure of the liquid and solid phases is reduced and the ST decreases. Inasmuch as a direct measurement of the ST at the fusion-nucleus boundary during crystallization does not appear to be possible, it is postulated that its magnitude can be determined at the boundary of the metastable fusion, that is, by the degree of supercooling. If, for some reason, the supercooling of the fusion decreases, this is taken as an indication that the ST has decreased. Thus, the ST can be estimated from the waiting time for the appearance of the first CC, that is, from the time during which the fused metal is

Card 2/104

L 19748-63

ACCESSION NR: AT3001936

in a supercooled state. Experiments for that purpose with Bi and As²⁷ are described. The crucible with the fusion was first heated in a resistance furnace and then cooled. Elastic vibrations were introduced into the fusion from above through a special wave guide. Minimal vibratory intensities at which no cavitation or dispersion occurred were employed. A magnetostrictive vibrator, fed by a US generator (10 kw), was used. Exposure time: 2 to 10 sec. The waiting time for the first CC in As was 3 orders of magnitude smaller in the irradiated fusion than in the nonirradiated fusion; in Bi it was 1 order of magnitude less. No change in crystalline-structure was observed in these short-term tests. Tests were made (with the participation of M. Ya. Fishkis) to determine experimentally the predominant first nucleation in a US field on insoluble impurities in a metal. The effect of the concentration and dispersion of impurities on the structures of an ingot crystallized in a field of elastic vibrations was also investigated. AV000 Al was employed. Impurities: CaCO_3 and Al_2O_3 , which, in suitable quantities, resulted in a refinement of the structure of the Al. From an analysis of the itemized experimental facts adduced it is postulated that the elastic vibrations evoke a dispersion of the insoluble impurities present in the fusion in a manner similar to that of solid particles suspended in a liquid medium. This dispersion of the impurities, the experiments show, will result in a comminution of the structure of an ingot. The formation of a more finely dispersed structure is also facilitated by the decrease

Card 3/04

L 19748-63

ACCESSION NR: AT3001936

3

of the effective ST resulting from the US vibrations. A test series was set up to investigate the dispersion of the solid particles of the impurity by elastic vibrations at T's above the crystallization T of the metal also. For this purpose, the fusion was heated to 700° and 0.5% CaCO_3 of a dispersivity of 0.10-0.25 mm was introduced. The fusion was exposed to elastic vibrations of the highest power introduced from above at a T of 670° . An identical experiment was made with the introduction of 0.5% of Al_2O_3 of a dispersivity of >0.05 mm. No changes in structure in these specimens were discovered. Thus, the effect of the refinement of the structure of an ingot crystallized in an US field in the presence of the impurity can only be attributed to an activation of the impurity in the US field. Not all metals are affected similarly by elastic vibrations. For example, the structure of ingots of stainless steel 1Kh18N9 does not exhibit any noticeable changes under elastic vibrations, whereas the stainless steel Kh25N20, fused from identical charge materials and exposed to elastic vibrations of the same power, becomes greatly refined. The structure of the tool steel EI347 was not affected significantly by elastic vibrations. In substance it is concluded that one of the factors that determines the suitability of a metal for treatment by elastic vibrations is the magnitude of the work of formation of nuclei. The smaller that work, the more effectively can the alloy be treated by elastic vibration. Orig. art. has 5 figs.

Card 4/04

TEUMIN, I.I.

Calculation of resonance frequencies of a stepped concentrator.
Akust. zhur. 9 no.3:387-388 '63. (MIRA 16:8)

1. Institut metallovedeniya i fiziki metallov, Moskva.
(Sound waves)

ABRAMOV, O.V.; TEUMIN, I.I.

Role of insoluble impurities during the crystallization of
metals in an ultrasonic field. Fiz. met. i metalloved. 15
no.5:710-716 My '63. (MIRA 16:8)

1. Institut metallovedeniya i fiziki metallov TSentral'nogo
nauchno-issledovatel'skogo instituta chernoy metallurgii.
(Nonferrous metals--Analysis)
(Crystallization)

TEUMIN, I.I.

Efficiency of ultrasonic concentrators. Akust. zhur. 9 no.2:
205-208 '63. (MIRA 16:4)

1. Institut metallovedeniya i fiziki metallov, Moskva.
(Ultrasonic waves) (Wave guides)

S/058/63/000/001/078/120
A160/A101

AUTHOR: Teumin, I. I.

TITLE: The treatment of metals with ultrasound during the crystallization process

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 48, abstract 1E315
("Sb. tr. In-t metallov. i fiz. metallov. Tsent. n-1. in-ta
chernoy metallurgii", 1962, 7, 375 - 416)

TEXT: A detailed investigation is carried out of the various methods and specific features of introducing supersonic oscillations in the melt. Indicated are the main results of the action of the elastic oscillations on the crystallization of the metals and alloys, i.e. the decrease of the mean size of the grain, the elimination of the acicular structure and the obtaining of equiaxial grains, the change of the phase-distribution character, the increase of the homogeneity of the structure, the elimination of various types of liquations, and the refinement and the uniform distribution of non-metallic impurities and insoluble admixtures. Explained are some concepts of the mechanism of the

Card 1/2

The treatment of metals with...

S/058/63/000/001/078/120
A160/A101

action of the elastic oscillations on the crystallization, and also the mechanism of such an action. Presented is the method of determining the necessary power of elastic oscillations for treating melts for a case of treating a stationary ingot, and for semi-continuous and continuous casting.

Ch. Kopetskiy

[Abstracter's note: Complete translation]

Card 2/2

NEYMARK, V.Ye.; TEUMIN, I.I.; FISHKIS, M.Ya.

Effect of inoculents and insoluble impurities on the crystallization
of bismuth and zinc in a field of elastic vibrations. Lit.proizv.
no.9:31-32 S '62.

(Crystallization) (Vibrations)

(MIRA 15:11)

ABRAMOV, O.V.; NEYMARK, V.Ye.; TEUMIN, I.I.

Characteristics and mechanism of the effect of elastic vibrations on the crystallization process of metals and alloys. Fiz. met. i metalloved. 13 no.6:875-878 Je '62.

(MIRA 15:7)

1. Institut metallovedeniya i fiziki metallov Tsentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii.

(Ultrasonic waves--Industrial applications)

(Crystallization) (Metallography)

TEUMIN, I.I., kand.fiziko-matematicheskikh nauk

Ultrasonic treatment of metals during the crystallization
process. Probl.metalloved.i fiz.met. no.7:375-416 '62.
(MIRA 15:5)

(Liquid metals) (Ultrasonic waves—Industrial application)

S/126/62/013/006/007/018
E071/E192

AUTHORS: Abramov, O.V., Neymark, V.Ye., and Teumin, I.I.

TITLE: Some special features and action of ultrasonics on the process of crystallization of metals and alloys

PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.6, 1962, 875-878

TEXT: The authors continue their earlier work (Ref.1: Ya.B. Gurevich, V.I. Leont'yev, I.I. Teumin, Problemy metallovedeniya i fiziki metallov (Problems of Metallography and the Physics of Metals,) 6, Moscow, Metallurgizdat, 1959) on the effect of ultrasonic vibration on the crystallization of metals and alloys, experimenting on liquid bismuth and antimony. The metal contained in a crucible was heated in a resistance furnace and the rate of cooling of the melt was controlled. Ultrasonic vibrations were applied from the top, the tip of the velocity transformer being preheated to a few degrees above the crystallization temperature of the metal. The experiments were carried out at a minimum ultrasonic intensity to eliminate

Card 1/3

Some special features and action ...

S/126/62/013/006/007/018
E071/E192

cavitation and dispersion. The magnetostrictive vibrator was energised by a 10 kW ultrasonic generator, and the output measured with a hot wire ammeter. Treatment of liquid bismuth and antimony with ultrasonic vibrations considerably decreases the duration of existence of supercooled liquid and leads to the formation of fine grain structure. The time of appearance of the first crystallization centre for antimony was by 3 orders lower in the irradiated melt than in the non-irradiated melt, and for bismuth by 1 order lower. The influence of insoluble admixtures on the diminution of the structure in an ultrasonic field was tested on aluminium with and without additions of calcium carbonate or alumina. Additions of the above substances in amounts of 0.5, 0.25 and 0.1% wt. were made in the form of fine powder (of various degrees of fineness) enclosed in an aluminium foil. The metal heated to 680 °C was poured at 665 °C into a steel mould with a vibrator attached at the bottom. The power was varied from P_{max} to 0.1 P_{max} . It was found that admixtures increase the effect of vibrations, although the admixtures in amounts up to 0.1% wt. in the absence of vibrations do not lead to the diminution of the grain structure.

Card 2/3

Some special features and action... S/126/62/013/006/007/018
E071/E192

The ultrasonic vibration treatment of the metal containing admixtures in quantities up to 0.1% wt. at temperatures above the crystallization temperature did not cause the diminution of the grain structure. It is concluded that the effect of diminution of the grain structure of the metal crystallized in an ultrasonic field in the presence of admixtures can be explained only by the activation of the admixture in this field. There are 2 figures.

ASSOCIATION: Institut metallovedeniya i fiziki metallov, TsNIChM
(Institute of Metallography and Physics of Metals,
TsNIChM).

SUBMITTED: August 23, 1961

Card 3/3

S/128/62/000/009/001/003
A004/A127

AUTHORS: Neymark, V. Ye., Teumin, I. I., Fishkis, M. Ya.

TITLE: The effect of inoculants and insoluble impurities on the crystallization of bismuth and zinc in the field of elastic vibrations


PERIODICAL: Liteynoye proizvodstvo, no. 9, 1962, 31 - 32

TEXT: Elastic vibrations acting on metals and alloys during the crystallization process substantially improve the macro- and microstructure of ingots. The authors present various opinions found in literature on the mechanism of the vibration effect. In the tests carried out by the authors with bismuth and zinc it was found that the effect of elastic vibrations on the structure and properties of metals is more efficacious in the presence of even small amounts of impurities in the melt. Soluble and insoluble inoculants were tested, sodium being used for bismuth and magnesium for zinc. The authors give a description of the tests and the test installation, present a number of graphs showing the effect of inoculants on the bismuth grain size and the zinc grain size - amount of magnesium curve, and microsection photos. The connection between the initial and final structures of the specimens indicate that there are more insoluble impurities in the fine-grained

Card 1/2

The effect of inoculants and insoluble impurities on... S/128/62/000/009/001/003
A004/A127

than in the coarse-grained zone. With inoculant concentrations lower than the optimum value, both the vibration and soluble additives reduce σ and their additive effect promotes a decrease of the work of nucleus formation. If the inoculant concentrations are higher than the optimum, the elastic vibrations destroy the adsorbing layers on the nucleus surface, which have not yet reached the critical size, causing the crystallization centers in the melt to increase. There are 5 figures and 9 references.



Card 2/2

35772

S/180/62/000/001/008/014
E021/E135

18.75w

AUTHOR: Teumin, I.I. (Moscow)

TITLE: The mechanism of the action of elastic vibrations
on the solidification of metals

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
tekhnicheskikh nauk. Metallurgiya i toplivo.
no.1, 1962, 94-99

TEXT: The effects of ultrasonic vibrations on the structure
of metals and alloys can be listed as follows: decrease in mean
grain size, elimination of columnar crystals, change in character
of the distribution of phases, increase in homogeneity of the
structure and removal of liquidation, breaking up and uniform
distribution of non-metallic inclusions and insoluble impurities.
These structural changes cause corresponding changes in
mechanical properties of the treated material. At the present
time the basic theory explaining these effects is still not
completely clear. The main ideas put forward to explain the
grain-refinement and elimination of columnar crystals are the
following: the crystals may break up and parts of the crystals
Card 1/2

X

The mechanism of the action of ...

S/180/62/000/001/008/014
EO21/E135

which break off can act as nuclei for crystallization; there may be an increased probability of nucleation of crystallization centres in an ultrasonic field and finally, impurities may play a special role enabling grain refinement in a field of elastic vibrations. Experiments have shown that ultrasonic vibrations remove the supercooling of melts and considerably accelerate the appearance of the first nucleus, i.e. lower the work of formation of a nucleus. Experiments have also shown that in the presence of an ultrasonic field, impurities become the centres of crystallization to a much greater extent than in the absence of an ultrasonic field. In this connection it should also be noted that pure metals are more difficult to treat with elastic vibrations.

There is 1 figure.

SUBMITTED: June 6, 1961

Card 2/2

X

L 18051-63

ACCESSION NR: AP3001696

EWP(k)/EWP(q)/EWT(m)/BDS

AFFTC/ASD Pf-4 JD/JG
S/0126/63/015/005/0710/0716

AUTHORS: Abramov, O. V.; Teumin, I. I.

TITLE: Effect of insoluble admixtures on metal crystallization in an ultrasonic field

SOURCE: Fizika metallov i metallovedeniye, v. 15, no. 5, 1963, 710-716

TOPIC TAGS: insoluble admixture, metal crystallization, ultrasonic field

ABSTRACT: The insoluble admixture effect on the threshold power (P_{th}) decrease in processing pure Sn, Bi, Zn and Al was studied and its possible mechanisms discussed. Ultrasonic oscillations were introduced into molten metals from above. The insoluble admixtures were: SiO_2 for Sn and Zn; Al_2O_3 for Bi; W for Al. These admixtures lowered the P_{th} magnitude of elastic oscillations and increased the degree of grain refinement. Dispersion of the admixture particles and their deformation did not occur in these experiments. The ultrasonic oscillations affect metal crystallization by generating crystallization centers. Various possible mechanisms of this process are described, and the significance

Card 1/2

L 18051-63

ACCESSION NR: AP3001696

of viscous friction in particle metallization is emphasized. Several other possible ultrasonic field effects upon the admixtures are also discussed. Orig. art. has: 2 tables and 5 figures.

ASSOCIATION: Institut metallovedeniya i fiziki metallov TsNIICHM (Institute of Physical Metallurgy, TsNIICHM)

SUBMITTED: 26Aug62

DATE ACQ: 11Jul63

ENCL: 00

SUB CODE: ML

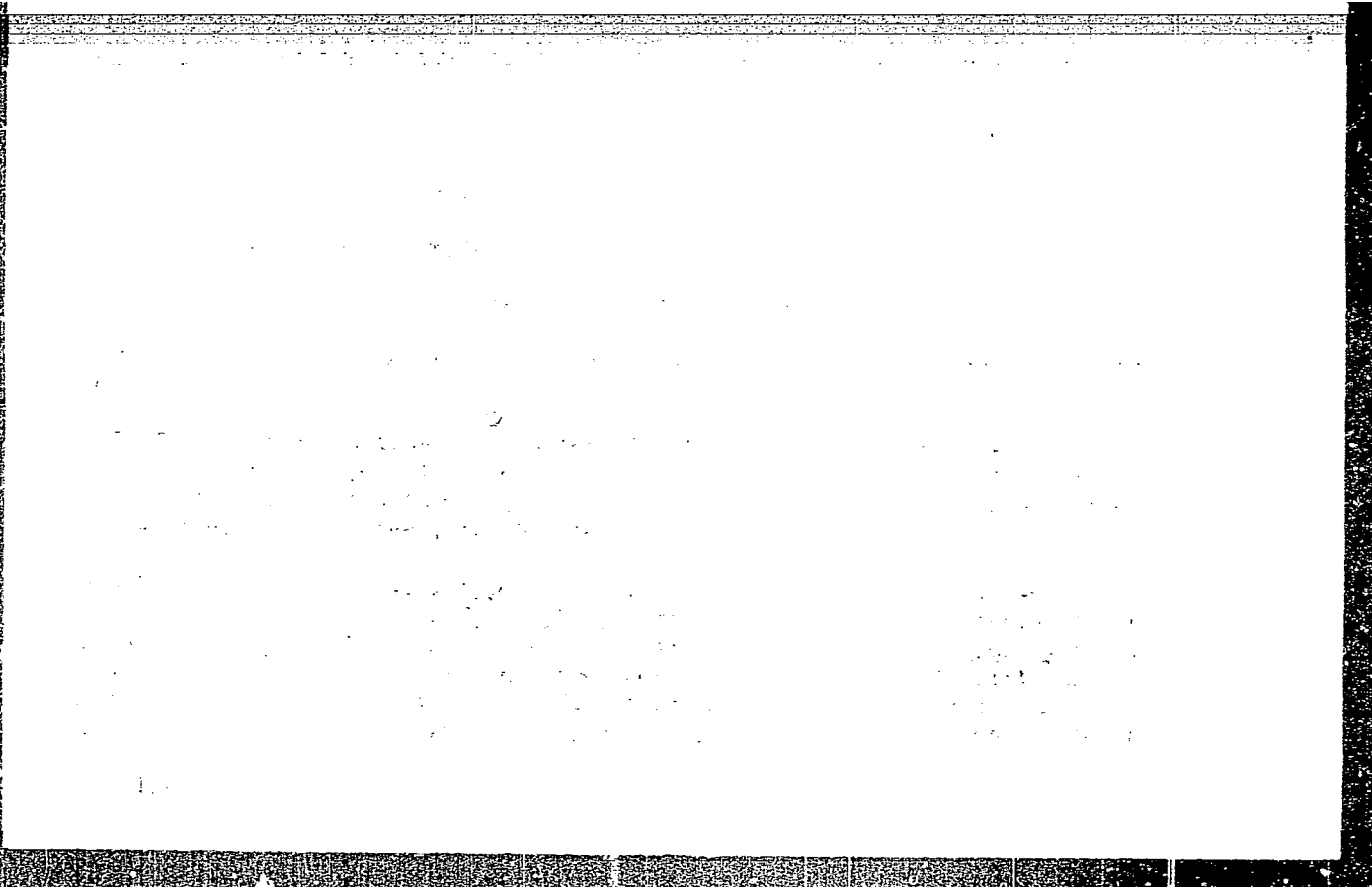
NO REF SOV: 009

OTHER: 001

Card 2/2

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001755510018-8



APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001755510018-8"

APPROVED FOR RELEASE: 03/14/2001

TITLE: Mechanism of structural changes in pure metals by elastic oscillations

SOURCE: Fizika metallov i metallovedeniye, No. 1, 1986, pp. 1-10

NOTE: 1. Mechanism of structural changes in pure metals by elastic oscillations, surface energy, mechanical properties

ABSTRACT: The mechanism of structural changes that occur in the metal under the action of elastic oscillations is considered.

1986 4/2

ACCESSION NR: APL042005

properties by elastic oscillations is lower Si and Sb being an exception. The authors investigated the mechanical properties of the specimens near the fusion point by ball test. Considering the increased probability of nucleation in an ultrasonic field the effects of viscous friction must be taken into account. Metals with a lower surface tension should have improved machineability but only indirect data are available on this contention. The authors tried to measure surface tension by the method of the sessile drop.

SUB CODE: MM

NO REF SOV: 009

OTHER: 002

ACCESSION NR: AP4039607

S/0126/64/017/005/0786/0789

AUTHORS: Abramov, O. V.; Teumin, I. I.

TITLE: The role of cavitation phenomenon during metal crystallization in an elastic oscillation field

SOURCE: Fizika metallov i metallovedeniye, v. 17, no. 5, 1964, 786-789

TOPIC TAGS: cavitation, metallic melt, elastic oscillation, ultrasonic generator, aluminum, bismuth, zinc, surface tension, metal crystallization, oscillograph EO 7, counter BF 2

ABSTRACT: In evaluating the role of cavitation in metals, the threshold capacity p_T is compared to the capacity where metallic melts give rise to a cavitation phenomenon p_C . Elastic oscillations are generated using a magnetostrictive transformer fed by 10-kv ultrasonic generator. A titanium probe carries signals to an EO-7 oscillograph through a BF-2 piezoelectric counter. The metals used were pure aluminum, bismuth, cadmium, zinc, tin, lead, and antimony melts kept at temperatures of 15-20C above solidification temperature. For Al, Bi, Pb, Sb, and Sn $p_T/p_{cav} \geq 1$, whereas Cd and Zn have no cavitation threshold capacity. Threshold cavitation is shown to depend on surface tension and liquid phase temperature. The experimental

Card 1/2

ACCESSION NR: AP4039607

points fall on a straight line relating P_T to the parameter ϕ defined by

$$\phi = \frac{2 - 3m + m^2}{4}, \text{ where } m = \frac{\sigma_{SL} - \sigma_S}{\sigma_L} = \cos(180^\circ - \alpha),$$

 where σ_{SL} - surface tension between solid and liquid, σ_S - surface tension between solid and vapor. Orig. art. has: 4 figures, 3 formulas, and 1 table.

ASSOCIATION: Institut metallovedeniya i fiziki metallov TsNIICM (Institute of Metallurgy and Physics of Metals TsNIICM)

SUBMITTED: 19Jun63

DATE ACQ: 19Jun64

ENCL: 00

SUB CODE: MM

NO REF SOV: 006

OTHER: 001

Card 2/2

ABRAMOV, O.V.; TEUMIN, I.I.

Role of cavitation phenomena during the crystallization of
metals in a field of elastic vibrations. Fiz. met. i
metalloved. 17 no.5:786-789 My '64. (MIRA 17:9)

1. Institut metallovedeniya i fiziki metallov Tsentral'nogo
nauchno-issledovatel'skogo instituta chernoy metallurgii.

L 45581-66 EWP(e)/EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW
 ACC NR: AP6031223 (N) SOURCE CODE: UR/0133/66/000/009/0834/0836

AUTHOR: Teumin, I. I.; Lupakov, I. S.; Lomakin, V. I.

ORG: none

TITLE: Ultrasonic treatment of boron-bearing steels during solidification

SOURCE: Stal', no. 9, 1966, 834-836

TOPIC TAGS: ultrasonic ^{vibration} ~~steel treatment~~, boron containing stainless steel, steel properties/Kh18N10R3 steel, Kh18N6G9R3 steel

ABSTRACT: Ingots of Kh18N10P3 and Kh18N6G9R3 high-boron stainless heat-resistant steels were treated with ultrasonic vibrations during their solidification. The weight of ingots was 15 kg, which is a usual production-scale size for ingots of these steels. It was found that ultrasonic treatment significantly reduced the grain size of the boron phase and improved the uniformity of its distribution throughout the ingot, thereby improving the mechanical and technological properties of steels. For instance, at 350C specimens of ultrasonically treated Kh18N10R3 steel had a tensile strength of 26.8 kg/mm², an elongation of 0.6% and a reduction of area of 1.4%. The same properties for untreated steel were 10.3 kg/mm², 0.0%, and 0.0% respectively. The mechanical properties of Kh18N6G9R3 steel were found to be similar. The forgeability of ultrasonically treated steels also was greatly improved.

Cord 1/2

UDC: 669.18-412:621.746.393-534.8

L 45581-66

ACC NR: AP6031223

a billet 30 x 60 x 80 mm was forged into a sheet bar 14 mm thick without difficulties.
Orig. art. has: 5 figures.

SUB CODE: 11, 13, 20/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: 5082 [TD]

Card 2/2 *LC*

S/180/61/000/001/002/015
E073/E535

AUTHOR: Teumin, I. N. (Moscow)

TITLE: Methods of and Features Relating to Introduction of Elastic Oscillations in Molten Metals

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1961, No.1, pp.24-30

TEXT: The following methods exist for introducing elastic oscillations into molten metal:

- 1) Introduction of elastic oscillations from the bottom (Fig.1a) or from the top (Fig.1b) (1 - transducer, 2 - concentrator, 3 - waveguide, 4 - radiating elements, 5 - ingot mould);
- 2) introduction of the oscillations in an intermediate stage (Fig.2);
- 3) introduction of the oscillations in continuous or semicontinuous casting (Fig.3). In this case the radiating elements 4 are submerged below the surface of the liquid and the solidifying part of the ingot is continuously drawn downwards. Usually, the crystallizer 1 is fitted with a water-cooled jacket 2. Introduction of elastic oscillations from the bottom (Fig.1a) has the advantage that the entire melt, including the first portion filling the ingot, is treated from the very first moment of teeming.

Card 1/6

Methods of and Features Relating S/180/61/000/001/002/015
E073/E535

✓
However, it has the following disadvantages: a) the upper layers are less efficiently treated, due to zonal solidification of the ingot and a reduced effectiveness of the operation of the oscillation system, brought about by adherence of solidified metal and a reduction in the effectiveness of the radiation penetrating into the liquid phase at the top through the layer which had solidified; b) possibility of penetration of the melt into the ring-shaped gap between the radiating element and the ingot mould; c) the entire volume has to be treated at the same time. As a result of this considerable power is required if the weight of the ingot is large. To a large extent zonal solidification and the disadvantages associated with it can be eliminated. If the oscillations are introduced from the top, zonal solidification will still take place but this will not affect the effectiveness of the treatment. However, it will have the following disadvantages: 1) the melt treatment will begin at the moment of teeming, when the level of the molten metal has reached the radiator, so that a part of the metal will crystallize prior to contact between the melt and the radiating element; 2) the radiating element must be

Card 2/6

Methods of and Features Relating S/180/61/000/001/002/015
E073/E535

submerged into the liquid phase until the end of the treatment, i.e. until full solidification. Since a shrinkage will always form on the top, the contact between the radiating element and the crystallizing melt may be broken. Due to the fact that the radiator and the waveguide system connected to it assist in the heat conductivity, the top part of the casting will be larger than if the radiating element was completely absent. 3) If the required conditions relating to treatment are ensured, the surface of the radiator will not be located in the super-cooled zone and will be immersed into the liquid phase almost all the time. Therefore, no crystals will form which could be dispersed in the melt by elastic oscillations and act as crystallization centres, in contrast to what happens if the elastic oscillations are introduced from the bottom. Consequently, introduction of oscillations from the top is not very effective and should be applied only in some special cases. Treatment of the crystallizing metal in an intermediate container, Fig.2, does not suffer from the drawbacks associated with zonal solidification but much more care must be taken to ensure the correct conditions, particularly as regards the teeming

Card 3/6

Methods of and Features Relating S/180/61/000/001/002/015
E073/E535

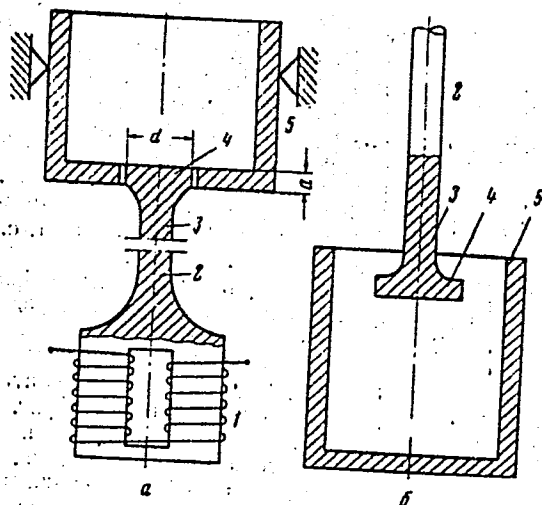
temperature and the treatment intensity. In spite of a number of advantages, it has the following disadvantages: a) the teeming temperature is critical; b) the teeming speed is critical; c) there is no temperature equalization in the main volume and this will lead to nonuniformity zones associated with ordinary conditions of heat removal during solidification of the ingot. If the oscillations are introduced into the top part of the melt during continuous and semicontinuous casting, Fig.3, the effect of the oscillations is concentrated mainly at the boundaries of the liquid and the solid phase, i.e. at the boundaries of the shrinkage cavity which always remains in the same position. For continuous and semicontinuous casting, this method of treatment is the most advantageous. The main problem relating to this method is to realize a radiator which can withstand for long periods contact with the molten metal under the effect of elastic oscillations. This problem has been solved for non-ferrous metals. There are 4 figures.

Card 4/6

Methods of and Features Relating....

S/180/61/000/001/002/015
E073/E535

Fig.1



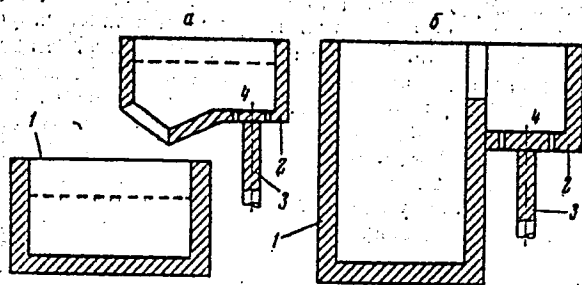
Card 5/6

Фиг. 1. Введение упругих колебаний в нижнюю (а) или верхнюю (б) части расплава; 1 — преобразователь упругих колебаний, 2 — концентратор, 3 — волновод, 4 — собственно излучатель, 5 — изложница

Methods of and Features Relating

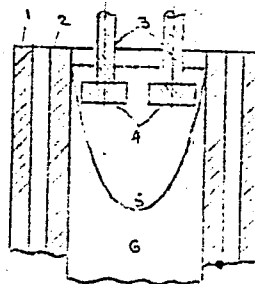
S/180/61/000/001/002/015
E073/E535

Fig. 2



Фиг. 2. Промежуточная обработка расплава

Fig. 3



Card 6/6

1. TEUMIN, L. S.
2. USSR (600)
4. Vitamins
7. Vitamin R. Priroda 42, No. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

TEUMIN, M.I.
GUTERMAN, M.B.; DROM', N.A.; LOZINSKIY, M.G.; TEUMIN, M.I. (Moskva).

Using simultaneous X-ray and microstructural analysis in studying
the processes of deformations of heated metals and alloys. Izv. AN
SSSR. Otd. tekhn. nauk no.1:11-20 Ja '58. (MIRA 11:3)

1. Institut mashinovedeniya AN SSSR.
(Metals at high temperatures) (Radiography)

TEUMIN, M.I.; NIKOLAYENKO, G.M.; IOFFE, Yu.K.

Sharp-focused X-ray tube with end outlet and direct anode contact
of the object analyzed. Prib. 1 tekhn. eksp. 8 no.4:160-161
Jl-Ag '63. (MIRA 16:12)

L 17320-63 EPR/EWT(1)/BDS AFFTC/ASD Ps-4 WH
ACCESSION NR: AP3004910 S/0120/63/000/004/0160/0161 61

AUTHOR: Teumin, M. I.; Nikolayenko, G. M.; Ioffe, Yu. K.

TITLE: Sharp-focused end-window X-ray tube with specimen-anode contact

SOURCE: Pribury*1 tekhnika eksperimenta, no. 4, 1963, 160-161

TOPIC TAGS: X-ray tube, end-window X-ray tube, sharp-focused X-ray tube, specimen-anode X-ray tube

ABSTRACT: An experimental model is described of a permanent-magnet, copper-anode, air-cooled X-ray tube whose grounded anode permits direct contact with the test specimen. The electron gun from an electron-beam tube was used as a cathode. Stable operation is reported at 45 kv with 300-500 microamp current; focus diameter is 50-100 microns. Characteristic X-ray intensity and its ratio to "white"-spectrum intensity are similar to those of a regular sharp-focused side-window X-ray tube, such as BSV-5. An X-ray picture of a 0.25-mm

Card 1/2

L 17320-63

ACCESSION NR: AP3004910

-thick Ge plate is presented. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 25Jul62

DATE ACQ: 28Aug63

ENCL: 00

SUB CODE: PH

NO REF SOV: 000

OTHER: 000

Card 2/2

TEUMIN, S. I.: YAKUSHKIN, I. V. Acad.

Knyag'ichev, M. I.

"Biochemistry of wheat," M. I. Knyag'ichev. Reviewed by Acad. I. V. Yakushkin, S. I. Teumin. Sov. Agron., 10, No. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

YAKUSHKIN, I. V., Acad., TEUMIN, S. I. Reviewers

Wheat

"Biochemistry of wheat." M. I. Knyag'ichev, Author. Reviewed by Acad. I. V. Yakushkin, S. I. Teumin. Sov. agron. 10, No. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

TEUMIN, S.

Wheat - Saratov (Province)

"Hard wheat in the Saratov Province." Reviewed by S. Teumin. Sov. agron. 10 no. 5, 1952

9. Monthly List of Russian Accessions, Library of Congress, July 1952, 2 Uncl.

Teumin, M. I.

AUTHORS: Guterman, M.B., Dron', N.A., Lozinskiy, M.G., and Teumin, M. I. (Moscow). ^{24-1-2/26}

TITLE: Simultaneous application of X-ray and micro-structural analyses for studying the processes of deformation in heated metals and alloys. (Odnovremennoye primeneniye rentgeno- i mikrostrukturnogo analizov dlya izucheniya protsessov deformatsii nagretykh metallov i splavov).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, No.1, pp. 11-20 + 2 plates (USSR)

ABSTRACT: In studying the kinetics of the process of deformation of metals and alloys within a wide range of temperatures and deformation speeds it is of great scientific and practical interest to investigate simultaneously the changes in the micro-structure of the material and the distortions of the crystal lattice caused by stresses of the first and second type by using X-ray methods. Apparatus developed by the Institute of Engineering Technology AS USSR (Institut Mashinovedeniya AN SSSR) and described in earlier papers (Refs. 1, 2) enables observation directly under a microscope and on photographs of the microstructure of metals and alloys during the process of heating up to 1100°C applying simultaneously tensile

Card 1/5

24-1-2/26

Simultaneous application of X-ray and micro-structural analyses for studying the processes of deformation in heated metals and alloys.

stresses of 0 to 60 kg/mm². Observation of the micro-structure during tensile stresses permits only seeing the results of sliding processes and of viscous displacement along the boundaries of the grains and the blocks. The micro-relief forming thereby on the polished surface of the specimen reflects the occurring changes in the micro-structure. It is particularly important to emphasize that these changes are due to processes which in most cases are irreversible and take place in volumes of the order of one or several grains. Processes preceding deformation cannot be investigated by micro-structural analysis but only by X-ray structural analysis, namely, by measuring the period of the crystal lattice for determining the magnitude of the internal stresses of the first type (elastic as well as residual) and also for determining the distortions in the crystal lattice caused by type II stresses. For obtaining a clear picture characterizing the stress state on the basis of X-ray diffraction patterns from individual crystallites, it is necessary to use a sharp X-ray beam. This can be

Card 2/5

24-1-2/26

Simultaneous application of X-ray and micro-structural analyses
for studying the processes of deformation in heated metals and alloys.

aperture or by applying an X-ray tube with a strong focussing system. Use of standard X-ray tubes (and a diaphragm) involves long exposure times of several hours. X-ray tubes with sharp focussing which would permit reducing considerably the exposure time have so far not been produced by Soviet industry. In a number of cases X-ray tubes with sharp focussing which can be assembled and disassembled were used in Soviet and non-Soviet laboratories. The disadvantage of using such tubes is that it is necessary to apply a system of evacuation and of controlling the vacuum, which makes the equipment cumbersome and complicated to operate. In this paper the results are described which were obtained with specimens of sealed sharp beam X-ray tubes, which were developed recently by two of the authors, photos of which are shown in Figs. 1 and 2. Furthermore, the design and operation is described of new test equipment, type ИМАШ-8, developed in the Institute of Engineering Technology by two of the authors of this paper and intended for studying the processes of deformation of metals and alloys during heating in vacuum using simultaneously micro-structural and X-ray structural methods of investigation.

Card 3/5

24-1-2/26

Simultaneous application of X-ray and micro-structural analyses for studying the processes of deformation in heated metals and alloys.

One of the developed tubes uses a magnetic focussing system, the drawback of which is that it is impossible to obtain a very sharp focussing for the used coil sizes. The tube with electrostatic focussing, Fig.2, is free of this drawback and produces a focal spot of a minimum of 40 μ . The developed tubes work with an anode voltage of 40 kV; the anode current is up to 200 μ A for the tubes with electromagnetic focussing and copper and iron reflectors and up to 500 μ A for the tubes with electrostatic focussing and copper reflectors. The deformation of metals and alloys in the ИМАШ-8 test machine is studied on specimens of the shape illustrated in the sketch, Fig.3. An axonometric picture of the mechanism of the vacuum chamber of the test apparatus is reproduced in Fig.4 and the basic electrical circuit and the vacuum circuit are shown in Fig.5. Fundamentally, the ИМАШ-8 is a further development of the ИМАШ-5 test apparatus which was described in detail in earlier work of one of the authors. As an example of using the ИМАШ-8 test apparatus, in the last part of the paper investigations are described of the

Card 4/5 process of deformation of a nickel-molybdenum alloy

24-1-2/26

Simultaneous application of X-ray and micro-structural analyses for studying the processes of deformation in heated metals and alloys.

containing 7% Mo at 600°C in vacuum. The results of these investigations are graphed in Fig.7. Micro-photographs and X-ray diffraction patterns produced during these experiments are shown in Figs.8 and 9. The simultaneous X-ray structural and micro-structural investigations of the process of deformation of heated materials with the here described equipment using the new, sharp beam X-ray tubes (which permit reducing the exposure time to 1.5 to 2 minutes) opens up extensive possibility of studying the relations governing the softening of metals and alloys. There are 9 figures and 4 references, all of which are Russian.

SUEMITTED: August 26, 1957.

ASSOCIATION: Institute of Engineering Technology, Ac.Sc. USSR.
(Institut Mashinovedeniya AN SSSR).

AVAILABLE: Library of Congress.

Card 5/5

774 21-4, 1-

30875. TEUMIN, S. AND YAKUSHKIN, I.

Vnimaniye tuerdoy pshenitse! Zagotovki s.-kh. produktov, 1949, No. 1,
s. 23-25.

YAKUSHKIN, I. V., Acad., TEUMIN, S. I., REVIEWERS

Wheat

"Biochemistry of wheat." M. I. Knyag'ichev, Author. Reviewed by Acad. I. V. Yakushkin, S. I. Teumin. Sov. agron. 10, No. 8, 1952

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

TEUMIN, S. I. : YAKUSHKIN, I. V., Acad.

Knyag'inichev, M. I.

"Biochemistry of wheat," M. I. Knyag'inichev. Reviewed by Acad. I. V. Yakushkin,
S. I. Teumin. Sov. agron., 10, No. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

1ST AND 2ND ORDER										3RD AND 4TH ORDER									
PRECEDENCE AND PRIORITY INDEX																			
<p><i>lb</i></p> <p>Fertilizer requirements: planning and allotment. S. I. TROMAN. <i>Uzbekistan i</i> (Traski 3, 000-9/1031). - T. presents a table on the limits of fertilizers which are generally considered as effective for the various crops in the 18 agricultural zones which comprise the territory of the U. S. S. R. For each region the crops are enumerated and the amt. of N, K₂O and P₂O₅ for each one of them is listed. T. S. TORMAN</p>																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
REGION 1										REGION 2									
SUBREGION 1										SUBREGION 2									
SUBSUBREGION 1										SUBSUBREGION 2									
SUBSUBSUBREGION 1										SUBSUBSUBREGION 2									

~~TRUNOV, K.~~; KATANIN, N.; NOVICHKOVA, I., redaktor; SHAPOVA, M.,
tekhnicheskiy redaktor

[Through the Kabardian A.S.S.R.; photographs] Po Kabardino-Balkarii.
Fotografii. [Moskva] Gos. izd-vo izobraz. iskusstva, 1957.
(Kabardia--Views) (MLRA 10:6)

TEUSH, B.G.
YEGORCHENKO, O.V.; TEUSH, B.G.

On the road to over-all mechanisation. Leg. prom. 17 no.1:
4-5 Ja '57. (MLRA 10:2)

1. Glavnyy inzhener Minskoy obuvnoy fabriki imeni L.M. Kaganovicha
(for Yegorchenko) 2. Nachal'nik tekhnicheskogo otdela Minskoy
obuvnoy fabriki imeni L.M. Kaganovicha (for Teush).
(Minsk--Shoe machinery)

BERRI, R.Ya., dotsent; KOZYLYAYEV, P.A., dotsent; LUNTS, G.L., dotsent;
LIBIN, M.L., starshiy prepodavatel'; ROZENTAL', M.I., assistant.
Prinimali uchastiye: FUKS, B.A., prof.; VOYEKOVA, S.V., dotsent;
KOZITSIN, V.I., dotsent; TEUSH, V.L., dotsent. ANOSHINA, K.I.,
red.; KUZ'MINA, N.S., tekhn.red.

[Higher mathematics; instructions and control problems for students
specializing in agriculture, fish culture, and forestry in upper-
level correspondence schools (departments)] Vysshaya matematika;
metodicheskie ukazaniya i kontrol'nye zadaniya dlia studentov sel'-
skokhoziaistvennykh, rybokhoziaistvennykh i lesokhoziaistvennykh
spetsial'nostei zaochnnykh vysshikh uchebnykh zavedenii (fakul'tetov).
Pod red. G.L.Luntsa. Moskva, Gos.izd-vo "Sovetskaya nauka," 1958.
90 p. (MIRA 12:4)

1. Russia (1923- U.S.S.R.) Ministerstvo vysshego obrazovaniya.
Metodicheskoye upravleniye.
(Mathematics)

TRUSH, V. L.

Pereschet skoropod"ernosti samoleta na liuboi ves po dannym letnykh ispytani. Moskva, 1936. 51 p., tables, diagrs. (TSAGI. Trudy, no. 287)

Summary in English.

Title tr.: Recalculation of the rate of climb of an aircraft for any weight on the basis of flight test data.

QA911.M65 no. 287

Wilson, V. L.

The operation of aorial propeller Moskva, Gos. izd-vo obor. promyshl., 1944. 83 p.

(51-47785)

TL705.Th

Teush Veniamin Lvovich

PHASE I BOOK EXPLOITATION

1075

Teush, Veniamin L'vovich

Kurs vysshey matematiki (Course in Higher Mathematics) Moscow, Gos. izd-vo "Sovetskaya nauka," 1958. 269 p. 16,000 copies printed.

Ed.: Macheret, Ya.A.; Ed. of Publishing House: Anoshina, K.I.; Tech. Ed.: Shlyk, M.D.

PURPOSE: This book is approved by the USSR Ministry of Agriculture as a textbook for students in agricultural vuzes.

COVERAGE: The book presents the fundamentals of analytic geometry, calculus and of differential equations and their applications in geometry and mechanics. Graphical representations and graphical methods of solution of problems are dealt with. The basic concepts and methods of probability theory and statistics are given. No personalities are mentioned. There are no references.

Card 1/12

TEUSHL', Otakar [Teyschl, O.] (Praga)

Toxiinfectious allergosis in childhood. *Pediatrics*, Moskva 36 no.8:
8-17 Ag '58. (MIRA 12:1)

(ALLERGY, in inf. & child,
toxi infect. allergoses (Rus))

TEUPSER, C.

SCIENCE

Periodicals: STUDIA GEOPHYSICA ET GEODAETICA. Vol. 3, no. 1, 1959

TEUPSER, C. A method for determining the feed-back factor in the Galitsin-type seismometers. In German. p. 92.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 5,
May 1959, Unclass.

MITARSKI, Jan; TEUTSCH, Aleksander

Immediate reactions to the incarceration and the degree of adaptation to living conditions among the inmates of nazi prisons and concentration camps. Polski tygod. lek. 16 no.42:1627-1631 16 0 '61.

1. Z Kliniki Psychiatrycznej A.M. w Krakowie; kierownik: prof. dr Eugeniusz Brzezicki.

(PRISONS)

(ADAPTATION PSYCHOLOGICAL)

S/058/62/000/010/024/093
A061/A101

AUTHORS: ~~Teutsch, H.~~, Mateescu, N., Pirlogea, P., Rădulescu, C., Timiș, P.,
Vasiliu, V.

TITLE: Characteristics of the curved slit neutron beam chopper at the
Institut atomnoy fiziki (Atomic Physics Institute) (Bucarest)

PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1962, 14, abstract 10B103
("Studii și cercetări fiz. Acad. RPR", 1961, v. 12, no. 3, 667 -
674, Rumanian; summaries in Russian and French)

TEXT: The design of a mechanical neutron beam chopper is described. The
principal chopper characteristics (transmission function and relative determina-
tion error of transit time $\Delta t/t$) are given.

[Abstracter's note: Complete translation]

Card 1/1